



## Income and health outcomes

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The life expectancy of the average American has increased substantially over the past 50 years. Although this is good news, a closer examination of health composites reveals some troubling signs. When polled, the number of Americans who describe their health as "very good" or "better" has recently dropped, and rates for obesity have risen dramatically. This is true across all income groups. Moreover, the pernicious and insidious tentacles of "stress" have crept into people's lives and risen among all income groups. A recent study uses measures of these variables—self-reported health, obesity, and stress loads—to show how wealth positively affects Americans' health.

In "Money lightens the load" (Hamilton Project, December 12, 2016), Diane Schanzenbach, Megan Mumford, Ryan Nunn, and Lauren Bauer analyze the relationship between age, income, and health status; comparing how these relationships have changed between two study periods: 1976–80 and 2009–14. The authors note that, over these two periods, income inequality has grown substantially. Top earners have experienced robust income growth, while middle- and low-income groups have experienced the opposite, weak growth. Coupled with this rising income disparity is an increasing disparity in mortality rates among the middle aged. The authors suggest that these two trends are not entirely unrelated.

To evaluate health status, the authors analyze data from the National Health and Nutrition Examination Survey (NHANES), a survey of demographic, socioeconomic, and health-related information. The NHANES has been collected since the 1970s and, because of this longevity, it allows users to compare the health of various cohorts over time.

As people age, their health inevitably declines. The authors find that within narrow age groups, the share of younger Americans who reported their health to be very good or better declined by over 10 percentage points between the 1976–80 period and the 2009–14 period. However, the share of people in the 50–74 age group who reported very good health or better increased over the two periods. When they examined an even older cohort, those between the ages of 65 and 69, they found that the proportion that reported that their health to be very good or better increased from 35 percent in the 1976–80 period to 46 percent in the 2009–14 period.

The authors' methodology keeps the focus solely on the relationship between income and health. Differential aging across income groups is not examined for fear that such analysis would be misleading.

The authors use three income groups for their analysis—top third, middle third, and bottom third—and adjust for race, income, and gender. They note that the average age of individuals in the middle- and high-income groups has increased since the 1976–80 period, while the average age of those in the low-income group has decreased. Ultimately, individuals from families with top incomes overwhelming report being in good health. Indeed, individuals in this group were more than twice as likely to report being in very good or excellent health than individuals in the



bottom group. The number of those who reported very good to excellent health has eroded over time, but for the top-income group, that erosion has been negligible. Rising rates of obesity have contributed to the overall decline in health. Obesity rates have risen across all demographic groups, albeit unevenly. Today, one-third of the adult population is obese and obesity rates trend upward with age. About 30 percent of 25- to 29-year-olds are obese, and 40 percent of those over age 50 share the same fate. While those with higher incomes are generally less prone to obesity, their rates have increased significantly. In fact, the data show that the high-income group in the 2009–14 period are 50 percent more likely to be obese than the low-income group in the 1976–80 period. In the earlier period, the correlation between obesity and income was clearly aligned, but in the later period the correlation has weakened. The middle- and low-income groups have similar rates of obesity.

The final variable the authors examined was stress, as measured by stress loads (a composite of important biomarkers including blood pressure, kidney function, and cardiovascular risk that are predictive of poor health). Those in the high-income group experienced lower stress loads than those in the middle- and low-income groups, but income was more closely associated with stress in the 2009–14 period than in the 1976–80 period. Stress load increased for all three groups in the 2009–14 period, but the increase was most dramatic for the low-income group.

The findings of this research indicate that those with higher incomes most likely have better health outcomes, but they, too, are beginning to show slight declines in recent years. But low-income Americans are in a much worse position. To help this group, the authors recommend a number of policy changes—including nutrition assistance, relocation to better neighborhoods, and labor reforms—to improve their economic position, and thus, their health outcomes.